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Bisinella, Valentina; Christensen, Thomas Højlund; Astrup, Thomas Fruergaard

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FUTURE SCENARIO ANALYSIS WITHIN WASTE MANAGEMENT AND LIFE CYCLE ASSESSMENT OF WASTE MANAGEMENT SOLUTIONS

V. BISINELLA, T.H. CHRISTENSEN, T.F. ASTRUP

Technical University of Denmark, Department of Environmental Engineering, Miljøvej, Building 113, 2800 Kongens Lyngby, Denmark

Waste management solutions are characterized by a long lifetime after design and construction (e.g. Brogaard et al., 2013), with an operative phase that takes place far into the future (Höjer et al., 2008). However, they are conceptualized, designed and environmentally assessed based on present day conditions and data. Future scenario analysis, or *foresight*, is a well-established practice in the field of management engineering. Foresight addresses long-term situations by providing multiple visions of a range of possible futures, highlighting central elements and key factors that will drive the future developments (Kosow and Gaßner, 2008; Schnaars, 1987; Wiek et al., 2006). Future scenarios thus show promising potential to fruitfully consolidate waste management design at various levels and stages.

Although being a flexible tool, the future scenario analysis practice is characterized by specific terminology, rationale and methods (Börjeson et al., 2006). In order for future scenarios to be effective, transparent and communicable for waste management applications, it is necessary to possess the essential knowledge and lexicon of foresight, as well as an updated overview of successful cases of its application within waste management.

The present study aims at providing general outlook of the main principles of foresight contextualized to the cases in the literature where future scenarios have been employed within the field of waste management and LCAs of waste management systems. The study provides examples of good practice, limitations and recommendations.

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